

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
17 July 2003 (17.07.2003)

PCT

(10) International Publication Number
WO 2003/058876 A3

(51) International Patent Classification⁷: **H04L 9/32**,
H04N 7/16, G06K 9/00

(21) International Application Number:
PCT/IB2002/005273

(22) International Filing Date: 9 December 2002 (09.12.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
02075093.1 11 January 2002 (11.01.2002) EP

(71) Applicant (for all designated States except US): **KONINKLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL];
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **VAN DER VEEN, Michiel** [NL/NL]; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(74) Agent: **GROENENDAAL, Antonius, W., M.**; Philips Intellectual Property & Standards, Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:
10 June 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: GENERATION OF A WATERMARK BEING UNIQUE TO A RECEIVER OF A MULTICAST TRANSMISSION OF MULTIMEDIA

(57) Abstract: A method, apparatus and system for distributing multimedia data in an efficient way using multicast transmission, whereby each receiver is provided with his own unique identifier in the form of a watermark and also additional information, typically global information for instance to comply with DRM rules, in the same watermark.

WO 2003/058876 A3

INTERNATIONAL SEARCH REPORT

PCT/IB 02/05273

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H04L9/32 H04N7/16 G06K9/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04L H04N G06K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	R. PARVIAINEN, P. PARNES: "LARGE SCALE DISTRIBUTED WATERMARKING OF MULTICAST MEDIA THROUGH ENCRYPTION" DEPARTMENT OF COMPUTER SCIENCE/CENTRE FOR DISTANCE-SPANNING TECHNOLOGY, 2001, XP002239136 Sweden * Section 3 *	1-15
Y	US 2001/012377 A1 (RHOADS GEOFFREY B) 9 August 2001 (2001-08-09) abstract paragraph '0003! - paragraph '0010! --- -/--	1-10, 14, 15

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

28 April 2003

Date of mailing of the international search report

17/07/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Apostolescu, R

INTERNATIONAL SEARCH REPORT

PCT/IB 02/05273

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JIAN ZHAO: "Applying Digital Watermarking Techniques to Online Multimedia Commerce" PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON IMAGING SCIENCE, SYSTEMS AND APPLICATIONS, XX, XX, 30 June 1997 (1997-06-30) - 3 July 1997 (1997-07-03), XP002221738 USA * Section 2.3 * * Section 4 *	11-13
A	WO 01 45410 A (SUN MICROSYSTEMS INC) 21 June 2001 (2001-06-21) page 4, line 1 - line 12 page 4, line 25 -page 5, line 14 page 7, line 9 - line 14 page 8, line 18 -page 10, line 14 page 11, line 14 - line 17 page 12, line 10 -page 14, line 25 page 16, line 16 -page 17, line 5 page 18, line 1 -page 19, line 4 page 20, line 17 - line 25	1-15
A	US 6 141 753 A (KOCH ECKHARD ET AL) 31 October 2000 (2000-10-31) column 1, line 37 - line 53 column 2, line 22 - line 56 column 3, line 48 -column 4, line 18 column 6, line 18 -column 7, line 13 column 8, line 43 - line 57	1-15
A	US 2001/004736 A1 (MURAMOTO KAZUHIKO ET AL) 21 June 2001 (2001-06-21) paragraph '0015! - paragraph '0017! paragraph '0020! - paragraph '0022! paragraph '0071! - paragraph '0073! paragraph '0080! - paragraph '0091! paragraph '0133!	1-15
A	US 2001/032313 A1 (HAITSMA JAAP ANDRE ET AL) 18 October 2001 (2001-10-18) hole document	1-15
A	HAITSMA J ET AL: "AUDIO WATERMARKING FOR MONITORING AND COPY PROTECTION" 2000 , PROCEEDINGS ACM MULTIMEDIA 2000 WORKSHOPS. MARINA DEL REY, CA, NOV. 4, 2000, ACM INTERNATIONAL MULTIMEDIA CONFERENCE, NEW YORK, NY: ACM, US, VOL. CONF. 8, PAGE(S) 119-122 , NETHERLANDS XP001003707 ISBN: 1-58113-311-1 hole document	1-15

INTERNATIONAL SEARCH REPORT

PCT/IB 02/05273

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2001012377 A1	09-08-2001	US 6266430 B1	24-07-2001
		US 6404898 B1	11-06-2002
		US 6026193 A	15-02-2000
		US 5748763 A	05-05-1998
		US 5768426 A	16-06-1998
		US 2001005423 A1	28-06-2001
		US 2002001396 A1	03-01-2002
		US 2001053236 A1	20-12-2001
		US 2002114492 A1	22-08-2002
		US 2003026451 A1	06-02-2003
		US 6353672 B1	05-03-2002
		US 2002080993 A1	27-06-2002
		US 2002061121 A1	23-05-2002
		US 2002064298 A1	30-05-2002
		US 2002164050 A1	07-11-2002
		US 2002176601 A1	28-11-2002
		US 2003021440 A1	30-01-2003
		US 6496591 B1	17-12-2002
		US 6400827 B1	04-06-2002
		US 6343138 B1	29-01-2002
		US 6539095 B1	25-03-2003
		US 6363159 B1	26-03-2002
		US 6542618 B1	01-04-2003
		US 6330335 B1	11-12-2001
		US 6289108 B1	11-09-2001
		US 6449379 B1	10-09-2002
		US 2002018572 A1	14-02-2002
		US 2002085718 A1	04-07-2002
		US 2002080997 A1	27-06-2002
		US 2002136430 A1	26-09-2002
		US 6324573 B1	27-11-2001
		US 2003002710 A1	02-01-2003
		US 6546112 B1	08-04-2003
		US 5841978 A	24-11-1998
		US 5841886 A	24-11-1998
		US 2002029253 A1	07-03-2002
		AT 237197 T	15-04-2003
		AT 199469 T	15-03-2001
		CA 2174413 A1	26-05-1995
		DE 69426787 D1	05-04-2001
		DE 69426787 T2	30-08-2001
		EP 0737387 A1	16-10-1996
		EP 0959620 A1	24-11-1999
		EP 0959621 A1	24-11-1999
		EP 0987855 A2	22-03-2000
		ES 2156456 T3	16-06-2001
		JP 9509795 T	30-09-1997
		WO 9514289 A2	26-05-1995
		US 2002164049 A1	07-11-2002
		US 6111954 A	29-08-2000
WO 0145410 A	21-06-2001	AU 2067101 A	25-06-2001
		WO 0145410 A2	21-06-2001
US 6141753 A	31-10-2000	CA 2319340 A1	19-08-1999
		EP 1055321 A1	29-11-2000
		WO 9941900 A1	19-08-1999
		JP 2002503838 T	05-02-2002

INTERNATIONAL SEARCH REPORT

PCT/IB 02/05273

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 2001004736	A1	21-06-2001	JP	2001177816 A	29-06-2001
US 2001032313	A1	18-10-2001	WO	0157868 A1	09-08-2001